

Docket No. 520.43328X00
Appl. No. 10/733,385
September 27, 2005

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1. (Currently amended) A catalytic material comprising a metal catalytic component and a catalyst carrier for supporting said metal catalytic component; wherein the catalyst carrier contains carbon and contains atoms that have formed ~~can be able to form~~ covalent bonds with said metal catalytic component.
2. (Cancelled).
3. (Currently amended) A catalytic material comprising a metal catalytic component and a catalyst carrier which comprises carbon; wherein said catalyst carrier has a structure in which part of the carbon atoms is replaced with atoms that have formed ~~can be able to form~~ covalent bonds with said metal catalytic component.
4. (Currently amended) The catalytic material according to claim 1, wherein said metal catalytic component is platinum or a platinum compound.
5. (Currently amended) The catalytic material according to claim 1, wherein said metal catalytic component is at least one member selected from the group consisting of platinum, ruthenium and their compounds.

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6. (Currently amended) The catalytic material according to claim 1, wherein said metal catalytic component is at least one member selected from the group consisting of platinum, ruthenium, manganese, iron, cobalt, nickel, rhodium, palladium, rhenium, and iridium, and their compounds.

7. (Currently amended) A catalytic material comprising a metal catalytic component and a catalyst carrier for supporting said metal catalytic component; wherein said catalyst carrier ~~further~~ contains carbon ~~a catalytic component~~ and at least one member selected from the group consisting of nitrogen atoms, oxygen atoms, phosphorus atoms, and sulfur atoms.

8-11. (Cancelled).

12. (New) The catalytic material according to claim 7, wherein said at least one member has formed covalent bonds with said metal catalytic component.

13. (New) The catalytic material according to claim 1, wherein said atoms that have formed covalent bonds with said metal catalytic component are chemically bonded to the carbon.

14. (New) The catalytic material according to claim 1, wherein said carbon is amorphous or crystalline.

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15. (New) The catalytic material according to claim 1, wherein said carbon is amorphous or crystalline.
16. (New) The catalytic material according to claim 15, wherein said nitrogen atoms are located on the surface of the catalyst carrier.
17. (New) The catalytic material according to claim 16, wherein a density of nitrogen atoms on the surface of the catalyst carrier is 0.1 to 30 atomic percent.
18. (New) The catalytic material according to claim 1, wherein said atoms that have formed covalent bonds with said metal catalytic component are located on the surface of the catalyst carrier.
19. (New) The catalytic material according to claim 18, wherein a density of atoms forming covalent bonds with said metal catalytic component, on the surface of the catalyst carrier, ranges from about 0.1 to 30 atomic percent.
20. (New) The catalytic material according to claim 3, wherein said atoms that have formed covalent bonds with said metal catalytic component are chemically bonded to the carbon.
21. (New) The catalytic material according to claim 3, wherein said carbon is amorphous or crystalline.

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22. (New) The catalytic material according to claim 3, wherein said atoms that have formed covalent bonds with said metal catalytic component are located on the surface of the catalyst carrier.

23. (New) The catalytic material according to claim 7, wherein said carbon is amorphous or crystalline.

24. (New) The catalytic material according to claim 7, wherein said at least one member is located on the surface of the catalyst carrier.

25. (New) The catalytic material according to claim 7, wherein said at least one member is chemically bonded to the carbon.

26. (New) The catalytic material according to claim 1, wherein the carbon is carbon material selected from the group consisting of carbon black, graphite, carbon nanofibers and carbon nanotubes.

27. (New) The catalytic material according to claim 3, wherein the carbon is carbon material selected from the group consisting of carbon black, graphite, carbon nanofibers and carbon nanotubes.

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28. (New) The catalytic material according to claim 7, wherein the carbon is carbon material selected from the group consisting of carbon black, graphite, carbon nanofibers and carbon nanotubes.